REMARKS

Rejection of Claims on Prior Art Grounds in the 06/03/2004 Office Action and Traversal Thereof

In the 03 June 2004 Office Action, claims 1-40 were rejected under 35 U.S.C. 102(b) as being anticipated by Per Cederqvist et al. (PC). The above rejection of the claims 1-40 are traversed, and consideration of the patentability of claims 1-40, as amended, is requested in light of the ensuing remarks.

Arguments for Patentability

In the most recent Office Action, the Examiner cites and strongly relies upon the PC reference that describes a version control system called CVS in rejecting the claims of the present invention. The Applicant asserts that the method and system for displaying changes to source code described in the amended claims 1-40 of the present patent application is (a) innovative and novel, and (b) substantially different from the PC prior art reference.

For comparison, the CVS version control system stores and manages versions of source code that have been modified or edited by saving only the differences between versions. (See PC, p.3) The CVS version control system provides each project developer with a separate working copy of the source code as an unreserved checkout allowing each programmer to independently develop their own updated versions. At a later point in time, each programmer can commit their changes to the main revision of the source code stored in the repository assuming no changes have been made in the meantime by the

other programming users. In the situation where there is only a single user, the changes would be simply committed and saved to the repository as a later version through the use of CVS commands. On the other hand, if a programming user attempts to commit their changes after a different user has updated the repository revision, the user will receive an error message. In this case, the programming user would employ the CVS commands to update their own working copy in accordance with the repository version. (See PC, p. 60) Therefore, the CVS system helps different software developers coordinate their independent and distinct source code modifications by forcing the adoption and use of updated versions.

By contrast, the present invention is a software development tool that simultaneously displays a textual and graphical representation of the source code to assist the creation and development of the source code. In addition, the present software tool allows the user to view indications of all the source code edits in the context of the textual and graphical views of the source code. The graphical representation of the source code according to the present invention is not simply an alpha-numeric or textual display but rather a diagrammatic display of functional relationships between various source code elements, which are illustrated by symbolic objects and connectors (see Figures 13-19 of the original application).

This combination of features is not described by the PC reference – the PC reference nowhere teaches the simultaneous display of indications of edits within the context of both diagrammatic and textual views of the source code itself, nor does the PC reference teach the display of indications of the edits within the context of a diagrammatic representation of the source code alone especially where the diagrammatic

representation contains non-alpha-numeric objects that display functional relationships between source code elements. Although CVS does allow the user to depict versions of the source code in a diagrammatic fashion, these revision diagrams simply display boxes containing revision numbers connected in a linear and/or branched arrangement to show the development of the source code over time. (See PC, pp. 43-49) These CVS revision diagrams do not display specific indications of individual source code edits, nor do they display any textual or graphical representation of the source code itself. Furthermore, these CVS revision diagrams only use text or alpha-numeric characters and do not use graphical objects like the present invention.

Another "graphical" component of the CVS version control system is the directory tree showing the organization of files stored in the repository. (See PC, p. 10) However, this feature is mostly for internal operation of the CVS program and is normally never accessed by the user. (See PC, p. 9) This is contradistinctive from the graphical component of the present invention, which readily displays objects representing elements of the source code as well as connectors representing functional relationships of source code elements alongside the indications of individual source code edits. Again, these directory trees use alpha-numeric or textual characters (not graphical objects) and do not represent a functional composition of source code elements. In addition, the inclusion of a repository within the CVS system to store files further distinguishes CVS from the present invention in that the present invention expressly excludes the conventional use of a repository [compare Figure 1 (prior art) and Figure 2]. Instead, the present invention uses a transient meta-model to store a language-neutral representation of the code to bypass the need for a repository.

The CVS system described by the PC reference only manages the development of multiple and independent versions of source code but does not manage the building of source code. (See PC, p. 4) By contrast, the present invention provides a software development tool that displays simultaneous textual and graphical representations of the source code, allows modification and development of the source code, and presents indications of individual source code edits alongside the textual and graphical views of the code. The CVS reference does not combine these features into a single software development platform but merely functions to manage multiple versions of source code and to update a particular version with different versions.

While when a CVS user attempts to update their own working copy of the source code with the repository revision, the CVS program will display portions of the source code that overlap and/or conflict to allow the user to compare the two versions. The CVS program will use indications such as '<<<<<<<', '=======', and '>>>>>>>' to mark the overlapping regions, and the Emacs package called emerge can be used to assist with these comparisons. (See PC, pp. 62-64) However, these displays are merely for the comparison of overlapping/conflicting sections of the source code between different versions of the source code to allow for the update of one version of the source code with the updated repository revision. This feature does not display a complete history of individual changes made to a single version of the source code over time and nowhere provides a graphical representation of functional relationships between source code elements with or without indications of the source code edits.

The Applicant maintains the argument that Notepad and other editors are merely textual and contain only textual control icons. These programs certainly do not display

simultaneous textual and graphical representations of the source code with indications of source code edits, nor do these programs display a graphical component alone displaying non-alpha-numeric and non-textual objects that diagrammatically represent functional relationships between source code elements alongside indications of individual source code edits.

For the foregoing reasons, the Applicant asserts that the now amended claims 1-40, less the canceled claims, are in patentable condition, and allowance of these claims is hereby respectfully requested.

CONCLUSION

If any issues remain outstanding, incident to the allowance of the application, Examiner Chuong is respectfully requested to contact the undersigned attorney at (919) 664-8222 or via email at jinang@trianglepatents.com to discuss the resolution of such issues, in order that prosecution of the application may be concluded favorably to the applicant, consistent with the applicant's making of a substantial advance in the art and particularly pointing out and distinctly claiming the subject matter that the applicant regards as the invention. This Office Action response is submitted via fax on August 28, 2004 to the official group fax number 703-872-9306.

Respectfully submitted,

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